Luis Angel Guerrero Hoyos

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About Me

I am a MS student in the CEE Department at the University of Washington. I hold a BS degree in Geological Engineering from the Universidad Nacional de Colombia, with 5+ years of industry experience. Passionate about geospatial data, GIS, remote sensing and geotechnical engineering, I excel in both autonomous and team-based learning environments. With outstanding interpersonal, written, and communication skills, I am adaptable to change and committed to continuous improvement. My creative and innovative mindset is focused on problem-solving, particularly within the realms of geospatial analysis, data engineering, geophysics, geotechnical engineering, and risk management. In addition to my academic and professional pursuits, I have a love for football, both as a player and a fan.

Skills

- **Geotechnical Tools:** Slide, Plaxis, gINT, Cliq, LiqSVs, Deepsoil, ProShake
- **Geospatial Tools:** QGIS, ArcGIS, Pix4D, CloudCompare, InSAR
- **Programming:** Python, GitHub, Matlab, AI
- **Frameworks & Libraries:** Geopandas, Rasterio, Xarray, Gdal
- **Databases:** SQL, PowerBI
- **Soft Skills:** Problem-Solving, Adaptability, Decision-Making, Communication, Leadership, Innovation, Relationships Management

Experience

Research Assistant and Scientist *(August 2023 - Present)* — University of Washington

- Investigating the geospatial relationships between earthquake-induced landslides and their reactivations.
- Interaction with geospatial data types, both rasters (GeoTIFF and satellite imagery) and vectors (GeoJSON, geopackage, shapefiles).

Geotechnical Intern *(June 2024 - September 2024)* — Terracon Consultants Inc

- Site reconnaissance and investigations, project scoping, budgeting, logging, geotechnical proposals and report preparation.
- Geotechnical earthquake analysis: site response and liquefaction.

Geotechnical Monitoring Analyst *(July 2021 - August 2023)* — Hexagon Geospatial

- InSAR data analysis and management from ground-based georadars.
- Real time geotechnical monitoring of pit slopes and tailing dams using ground-based interferometric radars, robotic total stations and GNSS.
- Technical support to the customer regarding monitoring, equipment, system, and software.
- Daily, weekly, and monthly report instable areas to the customer after the analysis for decision-making.

Geological Engineer *(January 2019 - July 2021)* — South32

- Managemement of GIS databases of drilling samples and data entry.
- Plan, excecute and supervise drilling campaigns.

Research Assistant and Scientist *(August 2017 - March 2018)* — UNALMED

- Research assistant for photointerpretation, geotechnical mapping and statistical modelling validation in the project "Hazard basic studies of landslides, debris flows and floods occurrence for land management at Aburrá Valley, Antioquia, Colombia".
- Propose an early warning system for the flash flows occurrence using the RTI methodology.

Education

Master of Science in Civil Engineering
University of Washington
Expected June 2025

Bachelor of Science in Geological Engineering
Universidad Nacional de Colombia (UNALMED)
May 2019

Awards & Certifications

- InSAR Processing and Analysis (ISCE+) - EarthScope Consortium & NSF, August 2024
- CEE Departmental Graduate Fellowship - University of Washington, September 2023
- InSAR and RAR Radar Monitoring - University of Arizona, December 2020

Languages

- English (Fluent)
- Spanish (Native)